

Appl. No. 10/738,416
Reply to Office Action of September 19, 2005

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 6. This sheet, which includes Fig. 4-6, replaces the original sheet including Fig. 4-6. In Figure 6, previously omitted element 62 has been added.

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REMARKS

Reconsideration and withdrawal of the rejection of Claims 1, 3-9, and 11-15 are respectfully requested in view of the foregoing amendments and the following arguments.

Amendments to Claims 1 and 9 are supported in the Specification from the beginning of Page 14 through onto the first paragraph, Page 15, and FIG. 16.

Claims 1, 5-9, and 13-15 were rejected under 35 U.S.C. §102(e) as being anticipated by Tuan et al. (US 6,562,681). Claims 2-4, and 10-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tuan et al, and further in view of Chuang et al. (US 6,847,068).

Claims 1 and 9 require “forming a dielectric layer over a substrate; removing a portion of said dielectric layer to define an area where said floating gate is to be formed; forming a gate dielectric layer overlying said dielectric layer and said area where said floating gate is to be formed, wherein said dielectric layer and the gate dielectric layer overlying said dielectric layer serve as a **gate layer** and said dielectric layer overlying said area where said floating gate is to be formed serves as a **tunneling layer**.” The phrase “forming a dielectric layer over a substrate” is supported by lines 14-15, paragraph 2, Page. 13. The phrase “removing a portion of said dielectric layer to define an area where said floating gate is to be formed” is supported by lines 1-3, paragraph 2, Page.14. The phrase “wherein the gate dielectric layer overlying said dielectric layer and said dielectric layer serve as a **gate layer** and said dielectric layer overlying said area where said floating gate is planned serves as a **tunneling layer**” is supported by lines 5-12, paragraph 1, Page. 15. Though the specification does not specify that the first dielectric layer 108 is a gate layer, FIG. 16 clearly shows that 148a is a control gate, and 160 and 164 are source and drain regions, respectively. The first dielectric layer 108 is a gate layer so that the control gate 148a controls current flows between the source region 160 and drain region 164.

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Tuan discloses a manufacturing method for nonvolatile memories. In FIG. 4, Tuan forms **an isolation trench 220, but not a gate layer**, in the memory, col. 2 lines 61-63. An isolation trench cannot serve the function of a gate layer due to its thickness. Thus, Tuan fails to disclose the step of forming the gate layer 108 under the control gate 148. Furthermore, one of ordinary skill in the art will not apply Tuan's method to form the structure that is formed by Claims 1 and 9 because the formation of the isolation trench 220 makes the function of the device of the application failed. Tuan thus neither discloses nor suggests the features of Claims 1 and 9.

For at least these reasons, Claims 1 and 9 are not anticipated and should be allowed.

Claims 5-8 and 13-15 are dependent on Claims 1 and 9, respectively. Each of these dependent claims was rejected under 35 U.S.C. §102(e). Claims 5-8 and 13-15 are not anticipated by Tuan for at least the same reason set forth above with respect to Claims 1 and 9.

For at least these reasons, Claims 5-8 and 13-15 should be allowed.

Claims 3-4 and 11-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Tuan. Because Tuan neither discloses nor suggests the features of Claims 1 and 9 as discussed above, Claims 1 and 9 should be patentable. Claims 3-4 and 11-12 are dependent claims of Claims 1 and 9, respectively. Claims 3-4 and 11-12 should be patentable over Tuan.

For at least reasons, Claims 3-4 and 11-12 are patentable under 35 U.S.C. §103(a).

Claims 3-4 and 11-12 were also rejected under 35 U.S.C. §103(a) as being unpatentable over Tuan in view of Chuang. The Applicant appreciates the Examiner's acknowledge that Tuan is silent about the steps of forming the gate dielectric as recited in Claims 3-4 and 11-12. Chuang's disclosure was cited as pertaining to various features of the dependent Claims 3-4 and 11-12. However, Chuang's disclosure fails to cure the deficiency of Tuan's patent with respect to the features of the independent Claims 1 and 9. The combination of Tuan's and Chuang's patents thus would not have made Claims 3-4 and 11-12 obvious.

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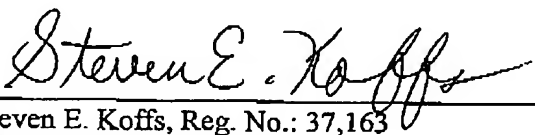
For at least these reasons, Claims 3-4 and 11-12 should be patentable.

In view of the foregoing amendments and remarks, Applicant submits that this application is in condition for allowance. Early notification to that effect is respectfully requested.

The Commissioner for Patents is hereby authorized to charge any additional fees or credit any excess payment that may be associated with this communication to deposit account 04-1679.

Respectfully submitted,

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